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C O N F I D E N T I A L SECTION 01 OF 02 DHAHRAN 000018

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TAGS: [EPET](#) [ENRG](#) [ECON](#) [PGOV](#) [SA](#) [BA](#)  
SUBJECT: SOLAR ENERGY PICKS UP MOMENTUM IN SAUDI ARABIA

REF: 09 DHAHRAN 150

CLASSIFIED BY: Joseph Kenny, Dhahran Consul General, Department  
of State.  
REASON: 1.4 (b), (d)  
SUMMARY

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¶1. (U) The First Energy Bank of Bahrain plans to build a polysilicon plant in Saudi Arabia to serve an increasing demand for solar energy power generation in the Middle East. The King Abdul Aziz City of Science and Technology (KACST) launched a major initiative to use its research facilities to develop solar energy and build solar-powered desalination plants in order to reduce water and energy costs by as much as 40 percent. End Summary.

POLYSILICON PRODUCTION EXPECTED IN 2013

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¶2. (U) The First Energy Bank of Bahrain plans to build a polysilicon plant in Saudi Arabia to serve an increasing demand for solar generated power in the Middle East. (Note: Polysilicon is an essential raw material in the production of solar cells used in panels that convert sunlight to electricity for businesses, homes, and farms. End Note.) Reuters reports that the Bank is joining Project Management and Development Co. (PMD) in Saudi Arabia to build a factory in Jubail, which will cost approximately USD \$1 billion. The factory is expected to have an annual capacity of 7,500 tons of polysilicon with production set to begin in 2013. Saudi Oil minister Ali al-Naimi has highlighted KSA's intent to be "the Saudi Arabia of solar power," and aims to make solar power a major component of Saudi energy supplies in the coming years.

¶3. (C) On January 25 CG Dhahran and PolOff met with VP of Fluor Arabia Limited, the company contracted by PMD to handle the front-end engineering and construction management of the polysilicon plant in Jubail, Saudi Arabia. This project is the first of its kind in KSA. Fluor's execution plan is to have the front-end engineering design performed in Fluor's Greenville, South Carolina offices, where they have already completed similar projects. Fluor VP expects this to not only maintain the jobs of those with the experience, but to add to Fluor's reputation as a world leader in the engineering and construction of polysilicon plants.

SOLAR TO POWER DESALINATION INDUSTRY

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14. (U) On January 24, the King Abdul Aziz City of Science and Technology (KACST) launched a major initiative to use its research facilities to develop solar energy and build solar-powered desalination plants in order to reduce domestic water and energy costs by as much as 40 percent. (Note: The new nanotechnology for using solar energy to operate desalination plants was developed by KACST in association with IBM. End Note.) As a result, the project is expected to significantly reduce the amount of oil and gas currently needed to power desalination plants. At present, desalination plants on the Red Sea and the Gulf consume an estimated 1.5 million barrels of oil per day.

15. (U) Though neither KACST nor the ministries involved have mentioned a specific date, the initiative will be carried out in several stages. (Note: KACST Vice President confirmed to EconCouns in Riyadh that the ministries of Finance, Water and Electricity, Commerce and Industry, and the Saline Water Conversion Corporation are all involved in the initiative, which will proceed in three phases over the next three years, building out from an initial pilot stage to full-scale implementation. As the KACST VP explained to EconCouns, KACST is using this project as the model for fourteen more Technology Implementation Centers it plans to create over the next five years. End Note.) The first plant will be a small 30,000 cubic meter per day facility in al-Khafji and is expected to serve 100,000 people. A 100,000 cubic meter per day facility will be built during the second phase with the expectation that, eventually, a network of plants will be built across the country. (Comment: These initial facilities are relatively small when compared to the 880,000 cubic meter per day facility on KSA's West coast, the world's largest. End Comment.)

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COMMENT

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16. (C) Given the insatiable domestic consumption of energy, the Saudis are very concerned about the need for sustainability. Though rich with oil and gas, the two are heavily subsidized in KSA. As a result, domestic demand is growing considerably (with no real incentives for conservation), in parallel with strong industrial growth and a rapidly growing population. As such, the SAG is missing an opportunity to profit from the export of oil and gas. The Saudis have said on numerous occasions in private meetings that the forgone opportunity cost is one they are willing to endure in the short term, as a repeal of subsidies is so politicized and could cause considerable social upheaval. The development of alternative energy in Saudi Arabia, though at first counterintuitive, is actually a strategic necessity. Again, subsidizing energy costs provides no incentives to conserve. As such, demand will continue rising unchecked.

17. (C) The advent of solar energy will have a positive impact, especially in the field of water desalination, as KSA reportedly supplies more than 18 percent of the world's desalinated water. Saudi Arabia's water consumption, too, is excessive, surpassing per capita European consumption rates by nearly double. Aside from the precious nature of water in a desert environment, water is a depreciating resource as well, and thus a strategic concern. Desalination is an effective method to maintain a consistent supply of water; but, it is taxing KSA's natural resources and hence the move to an alternative/additional energy source, though an expensive one (at least initially), is a necessary one. This project is also a very important milestone

in the Kingdom's efforts to create job-generating elements of a knowledge based economy, and is a further indication that the SAG is increasingly determined to play a major role in the world's solar power industry. End Comment.

CG: JKENNY